

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of managing access network protocol context in an access system comprising a plurality of mobile nodes, access nodes serving said mobile nodes, a first gateway node for interfacing a first part of the access system with external networks, and a first mobility entity which is associated with said first gateway node and arranged to provide macro mobility management services to the mobile nodes while registered to a respective part of the access system, said method comprising:

opening at least one access network protocol context at a first access node to activate a packet data address and make the packet data address known to the first gateway node in order to establish a connection between one of said plurality of mobile nodes and said first gateway node,

initiating a macro mobility registration over said access network connection between the mobile node and the first mobility entity,

monitoring at the first gateway node the macro mobility registration,

determining on the basis of the result of the registration that at least one access network protocol context is no longer necessary,

triggering a deletion of the unnecessary access network protocol context.

2. (Previously Presented) A method as claimed in claim 1, comprising

determining at the first gateway node, in response to detecting a failure in said macro mobility registration, whether it is possible to retry the macro mobility registration or whether the registration has irrecoverably failed.

3. (Previously Presented) A method as claimed in claim 1, comprising the gateway node sending a context deletion message to the first access node, when the macro mobility registration irrecoverably fails.

4. (Previously Presented) A method as claimed in claim 3, comprising

deleting at the first access node the PDP context to the first gateway node in response to receiving said context deletion message.

5. (Previously Presented) A method as claimed in claim 4, comprising deleting at the first access node the PDP context to the mobile node in response to receiving said deletion message.

6. (Previously Presented) A method as claimed in claim 1, wherein said registration is due to a handover from a second gateway node to said first gateway node, the method comprising further steps of

deciding at the first access node, in response to receiving a context deletion message from the first gateway node, whether to maintain or recreate an old PDP context to an old gateway node, or to delete the PDP context to the old gateway node and/or to the mobile node.

7. (Previously Presented) A method as claimed in claim 6, wherein said decision is based on a cause value in said context deletion message, said cause value indicating a cause for sending the context deletion message.

8. (Previously Presented) A method as claimed in claim 1, wherein said macro mobility management is Internet Protocol-type, or IP-type mobility management.

9. (Previously Presented) A method as claimed in claim 1 in a radio access system, wherein said access network protocol context comprises a packet protocol context .

10. (Previously Presented) A method as claimed in claim 1, wherein said mobility entity associated with the gateway node is a foreign agent.

11. (Previously Presented) An access system, comprising
a plurality of mobile nodes,
access nodes,
a first gateway node for interfacing said access system with external networks,

a first mobility entity which is associated with said first gateway node and arranged to provide macro mobility management services to the mobile nodes while registered to a respective part of the access system,

each mobile node being able to perform a macro mobility registration to the first mobility entity over a respective dedicated access network connection established by opening an access network protocol context at a first access node and the first gateway node,

the first gateway node being arranged to monitor the macro mobility registration, to trigger a deletion of any access network protocol context which is no longer necessary on the basis of the result of the registration.

12. (Previously Presented) A system as claimed in claim 11, comprising the first gateway node being arranged to determine, in response to detecting a failure in said macro mobility registration, whether it is possible to retry the macro mobility registration or whether the registration has irrecoverably failed.

13. (Previously Presented) A system as claimed in claim 11, comprising the gateway node being arranged to send a context deletion message to the first access node, when the macro mobility registration irrecoverably fails.

14. (Previously Presented) A system as claimed in claim 13, comprising first access node being arranged to delete the PDP context to the first gateway node and/or the PDP context to the mobile node in response to receiving said deletion message.

15. (Previously Presented) A system as claimed in claim 11, comprising said registration being due to a handover from a second gateway node to said first gateway node, and said first access node being arranged to decide, in response to receiving a context deletion message from the first gateway node, whether to maintain or recreate an old PDP context to an old gateway node, or to delete the PDP context to the old gateway node and/or to the mobile node, based on a cause value in said context deletion message, said cause value indicating a cause for sending the context deletion message.

16. (Previously Presented) A system as claimed in claim 11, wherein said macro mobility management is Internet Protocol-type, or IP-type mobility management, and wherein said mobility entity associated with the gateway node is a foreign agent.

17. (Previously Presented) A system as claimed in claim 11 in a radio access system, wherein said access network protocol context comprises a packet protocol context.

18. (Previously Presented) A gateway node for an access system which comprises a plurality of mobile nodes, access nodes and a first mobility entity which is associated with said first gateway node and arranged to provide macro mobility management services to the mobile nodes, each mobile node being able to perform a macro mobility registration to the first mobility entity over a respective dedicated access network connection established by opening an access network protocol context at a first access node and the first gateway node, said first gateway node being arranged to monitor the macro mobility registration and to trigger a deletion of any access network protocol context which is no longer necessary on the basis of the result of the registration.

19. (Previously Presented) A gateway node as claimed in claim 18, comprising said gateway node being arranged to determine, in response to detecting a failure in said macro mobility registration, whether it is possible to retry the macro mobility registration or whether the registration has irrecoverably failed.

20. (Previously Presented) A gateway node as claimed in claim 18, comprising said gateway node being arranged to send a context deletion message to the first access node, when the macro mobility registration irrecoverably fails.

21. (Previously Presented) A gateway node as claimed in claim 18, comprising said gateway node being integrated into the same physical node with said access node.